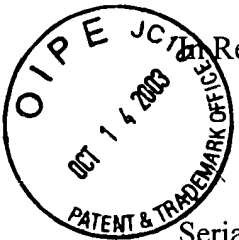


10-15-03

AF/27#16
137, 10/15/03

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Re the Application of:

Henning Von Spreckelsen and
Peter M. McGeough

Serial No.: 09/701,057

Filed: November 22, 2000

Atty. File No.: 44257.830001

For: "THIN-WALLED PLASTICS
BOTTLE, CLOSURE AND
BOTTLING PROCESS"

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

) Art Unit: 3727

) Examiner: Nathan J. Newhouse

) Confirmation No.: 7735

) TRANSMITTAL OF REPLY BRIEF

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PRINTED NAME: Sherry Soares

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Dear Sir:

Enclosed please find in triplicate an "REPLY BRIEF" for the above-identified patent application. No fees are believed to be due with this Reply. In the event any such fees are due, please debit Deposit Account 08-2623.

Respectfully submitted,

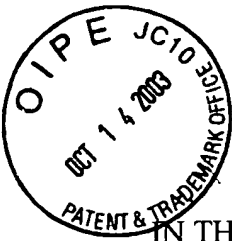
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Date: 10/14/03

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PRINTED NAME: Sherry Soares

SIGNATURE: *Sherry Soares*

REPLY BRIEF

RECEIVED
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Dear Sir:

This reply brief is filed in response to the EXAMINER'S ANSWER mailed on
09/02/2003.

In this EXAMINER'S ANSWER the Examiner cited and discussed United States Patent
4,722,448 to Nolan.

This reply brief is filed (1) to correct statements that the Examiner made relative to this
patent to Nolan, and (2) to request consideration of International Publication Number WO
02/064432 A2 (attached hereto as Exhibit I), which publication came to the attention of
appellants after appellants' appeal brief was filed.

THE NOLAN PATENT

In accordance with 37 CFR 1.193 the Examiner's discussion of this Nolan patent did not include a new ground of rejection. However, the Examiner's statements relative to the teachings of Nolan are not correct.

More specifically, the Examiner states "However, the U. S. Patent 4,722,448 to Nolan teaches an injection molded cap used to seal a blow molded milk bottle as the cap is attached to the bottle via a foil seal that causes the cap to be heat sealed to the bottle" (underlining added).

It is true that this patent to Nolan provides an injection molded cap (see col. 2, lines 56-59). It is also true that Nolan's bottle is a blow-molded light weight milk bottle (see col. 3, line 67, to col. 4, line 2).

However the Examiner's statement that "the cap is attached to the bottle via a foil seal that causes the cap to be heat sealed to the bottle" is not correct.

In truth, in this Nolan patent the cap is a snap-cap wherein "When the cap is snapped on to the bottle neck it tends to expand circumferentially, when a bead slides into a shoulder of the bottle neck, and then contract when that bead snaps over that shoulder" (see col. 3, lines 21-24) (see col. 2, lines 37-42) (see the two cap-beads 19,23 and the two bottle-shoulders 21,24 in FIG. 3).

Relative to Nolan's FIG. 9, Nolan states that the cap "may be employed with a gasket which is wholly or partially a foil, such as a thin metal foil" that "may be heat-sealed to the top of the bottle in a conventional manner, as by induction heating" (see col.4, lines 57-65).

Note that in FIG. 3 of Nolan the bottle-neck is sealed using only the cap.

In FIG. 9 of Nolan caps containing foil liners are snapped onto the necks of the bottles.
Therefore the foil and the cap form a first and a second independently-operating means of sealing the bottle-neck.

Thus the Examiner is not correct in stating that the "cap is attached to the bottle via a foil seal that causes the cap to be heat sealed to the bottle". In Nolan a backing layer of the foil may be held to the bottom wall of the cap, but this holding function can not be accomplished by a heat seal, because if it were accomplished by a heat seal it would be impossible to remove the cap without also rupturing the foil, and Nolan states that the foil is ruptured after the cap has been removed.

wrong
backing layer
separates
from
foil
col 5
L10-22

More specifically, FIG. 9 of Nolan describes a typical prior-art milk bottle having a conventional push-on closure wherein the bottom side of a standard foil is heat-sealed only to the top of the neck of the bottle by induction heating, thus providing a primary seal for the bottle. The top of this foil carries a backing-layer that can be adhesively-attached to the cap, such that removal of the cap removes the foil's backing layer, as the foil continues to seal the bottle until a later time at which the foil is broken. After the foil has been broken and removed, this backing layer serves as a gasket for subsequent reclosure of the bottle by the cap. (see col. 4, line 57, to col. 5, line 22).

In Nolan gaskets of this type are poor resealing devices, again due to the poor tolerances that are achieved on the lightweight extrusion blow-molded bottle neck, but also due to tearing of the top surface of the bottle neck that occurs as the foil is peeled-off-of, and removing-from, the top surface of the bottle neck.

Thus this Nolan patent describes a prior art closure that does not work well in that the ribs on Nolan's injection molded cap do not seal to Nolan's blow-molded light weight milk bottle due to tolerance differences that exist in the two molding processes.

Note that in Nolan the foil is not bonded between the cap assembly and the neck of the bottle. That is, in Nolan the foil is not bonded to both the cap assembly and the neck of the bottle. In Nolan the foil can be temporarily held in place within the cap, to prevent the foil from

falling out during sorting and the like, prior to application of the cap to a bottle (this can be achieved through an interference-fit between the foil and the cap, or by using temporary sacrificial adhesion of the top surface of the foil's backing layer to the bottom surface of the cap).

It is important to note that the bottom-side of Nolan's foil is bonded to only the neck of the bottle, to thus seal the bottle. In the Nolan construction and arrangement after the foil has been broken subsequent sealing of the bottle is unreliable due to the tolerance differences that exist between the injection molding and blow molding processes.

That is, after Nolan's foil is broken a reliable seal is not provided because in Nolan an injection molded cap has been snap-fitted to a blow molded bottle by virtue of the cap expanding circumferentially as a cap-bead slides into a shoulder on the bottle neck, the cap then contracting when the bead snaps over the shoulder, this construction and arrangement providing an unreliable injection-molded-to-blow-molded sealing interface.

In the present invention a foil is bonded between (i.e. bonded to both) an injection molded neck/cap assembly and the neck of an extrusion blow molded bottle, and after the center of the foil has been broken and torn out, reliable sealing is provided by (1) the edge portion of the seal that remains bonded between the injection molded neck and the extrusion blow molded bottle, and (2) the injection molded cap that reliably seals to the injection molded neck.

INTERNATIONAL PUBLICATION NUMBER WO 02/064432 A2

EXHIBIT I attached hereto is a copy of International Publication Number WO 02/064432 A2 which came to the attention of appellants after the filing of an appeal brief in the present appeal.

Pages 1, 2 and the first paragraph of page 3 of this publication describes problems that are encountered when milk that has been packaged in blow molded plastics containers that are resealed by injection molded caps.

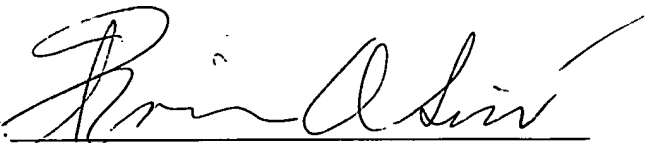
Beginning at line 36 of page 4 to line 21 of page 5 the present invention is described as a solution to this problem.

Upon information and belief, the applicant named on this publication, i.e. Portola Packaging Limited, supplies about 60% of the dairy closures in the United Kingdom and over 50% of the dairy closures used in the United States.

It is respectfully submitted that this comment by such a significant supplier of dairy closures on the problem of reliable mating blow molded plastics containers to injection molded caps is evidence of a long-felt need for a solution to this problem, and it is respectfully submitted that this publication's recognition of the present invention as a solution to this problem is evidence of the patentability of the present invention's means of solving this long-felt problem.

Respectfully submitted,

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